REMARKS

The last Office Action of August 25, 2006 has been carefully considered. Reconsideration of the instant application in view of the foregoing amendments and the following remarks is respectfully requested.

Claims 1-10 are pending in the application. Claims 1 and 5 have been amended. Claims 6-10 have been canceled. No amendment to the specification has been made. No fee is due.

Claims 1-10 stand rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent Application Publication 2002/0193972 to Kudo et al. (hereinafter "Kudo").

In order to clearly distinguish the present invention from Kudo, applicant has amended claim 1 by setting forth a measuring and simulation system which is operatively connected to the machine-tool or production machine and simulates a desired response of the machine-tool or production machine using simulation parameters. The desired response defines an amplitude-frequency curve of the machine-tool or production machine, whereby the simulation parameters are selected from the group consisting of a rotation speed control parameter, a position control parameter, and a travel path of a workpiece. A controller generates control parameters with the simulation parameters and uses the generated control parameters to control the machine-tool or production machine. A single display screen is provided for visualizing the desired response and a measured actual response of the machine-tool or production machine simultaneously side-by-side on the single display screen in form of amplitude-frequency curves.

Claim 5 recites a corresponding method, and both claims 1 and 5 include the limitations of claims 6 and 7, which have been canceled.

In the present invention, a desired and an actual reaction of the machine-tool or production machine are displayed next to each other on the same display screen as an amplitude-frequency curve, because visualization in form of an

4

amplitude-frequency curve provides particularly comprehensive information about undesirable deviations between the simulation and actual data for the certain characteristic features of interest for the machine designer, such as rotation speed, position control and travel path of the workpiece. These elements are part of the machine control and must therefore be controlled. Machine controllers are practically always implemented as closed loop controllers which include as control parameters a proportional section, a differential section and an integral section. The amplitude-frequency curve shows a distinguishing change when one or several of the control parameters in the aforementioned sections are changed. For example, increasing the proportional portion increases the amplitude in the amplitude-frequency curve, an increase in the differential portion contributes to amplification of the components with higher frequency in the aforementioned curve, and an increase in the integral portion causes an increase in the low - frequency contributions.

Using the amplitude-frequency curve is particularly advantageous, because changes of the aforementioned control parameters for the speed control, the position control and the travel path of the workpiece are displayed at different positions on the amplitude-frequency curve and can therefore be analyzed by the operator of the machine independent from each other and thereby optimized.

For example, if instead of the amplitude-frequency curve only the temporal reaction of the rotation speed control were displayed next to each other as a desired and an actual reaction, then changes in the control parameters would be superimposed in the visualization and would not be resolved or could not be inferred from the displayed curve, as is the case with the present invention, where the amplitude-frequency curve is displayed.

Both claims 1 and 5 recite that the response of the machine, both simulated and actual, is defined as amplitude-frequency curves. This limitation was previously recited in canceled claim 7.

The Office Action refers to section [0100] in Kudo as disclosing some sort of frequency signals, for example, from a microphone. As stated in that section,

microphones 63b are used for recording sounds in the environment of the production facilities 72 ... . The sound amplitude is generally recorded as a function of time, and only a transformation into frequency space (e.g., by a Fourier transformation) will produce an amplitude-frequency curve. Nowhere does Kudo disclose or suggest transforming the time-dependent sound signal into a frequency-dependent sound signal, as recited in original claim 7.

For the reasons set forth above, it is applicant's contention that Kudo neither teaches or suggests the features of the present invention, as recited in claim 1.

As for the rejection of the retained dependent claims, these claims depend on claim 1, share its presumably allowable features, and therefore it is respectfully submitted that these claims should also be allowed.
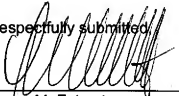
In view of the above presented remarks and amendments, it is respectfully submitted that all claims on file should be considered patentably differentiated over the art and should be allowed.

Reconsideration and allowance of the present application are respectfully requested.

Should the Examiner consider necessary or desirable any formal changes anywhere in the specification, claims and/or drawing, then it is respectfully requested that such changes be made by Examiner's Amendment, if the Examiner feels this would facilitate passage of the case to issuance. If the Examiner feels that it might be helpful in advancing this case by calling the undersigned, applicant would greatly appreciate such a telephone interview.

Respectfully submitted,

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